AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A method for controlling temperature in a boil-off gas in a liquefaction plant prior to compression, wherein boil-off gas originating from an LNG storage tank is compressed and at least partially condensed into a condensed boil-off gas, and wherein said condensed boil-off gas ~~(LNG)~~ is ~~being~~ returned to the storage tank, said method ~~being characterized by~~ comprising:

heat exchanging the boil-off gas with ~~said LNG~~ a condensed liquefied gas (LNG) through a wall separating said boil-off gas from said condensed liquefied gas (LNG), ~~wherein~~ the boil-off gas temperature ~~is~~ being lowered and said condensed liquefied gas LNG being fully evaporated as a fully evaporated LNG; and

controllably mixing said fully evaporated LNG with said boil-off gas.

2. (currently amended) The method of claim 1, ~~characterized by~~ wherein said mixing of said fully evaporated LNG with said boil-off gas occurs upstream of said heat exchange.

3. (currently amended) The method of claim 1, ~~characterized by~~ wherein said mixing of said fully evaporated LNG with said boil-off gas during said compression.

4. (currently amended) The method of claim 1, ~~characterized by~~ wherein said mixing of said fully evaporated LNG with said boil-off gas following said compression.

5. (currently amended) The method of claim 1, ~~characterized by :~~ wherein ~~maintaining~~ a continuous flow of LNG and boil-off gas is maintained in said heat ~~exchange~~ exchanging step, whereby the LNG temperature is substantially constant.

6. (currently amended) The method of claim 1, ~~characterized by~~ wherein said controlling (25,60) of the mixing rate ~~based on~~ comprises the sub-step of comparing the temperature of the boil-off gas, downstream of said heat exchange, with [[a]] one or more predetermined ~~temperature or range of~~ temperatures.

7. (currently amended) An apparatus for controlling temperature in a boil-off gas in a liquefaction plant prior to compression, wherein boil-off gas from an LNG storage tank is fed via a boil-off gas feed line into at least one compressor (10) and where ~~the~~ compressed gas provided by the at least one compressor (10) is further fed into a heat exchanger (30) for at

least partial condensation into a condensed boil-off gas (LNG), and where said condensed boil-off gas (LNG) is ~~being~~ returned to the storage tank via a return line, said apparatus ~~being characterized by~~ comprising:

[[-]] a combined mist separator and heat exchanger (20) connected to the ~~the~~ boil-off gas feed line[[,]] at a point along the boil-off gas feed line between the LNG storage tank and the compressor (10);

[[-]] a first conduit (22) fluidly connecting the return line ~~for returning LNG to the storage tank~~ and the combined mist separator and heat exchanger (20); and

[[-]] a second conduit ~~(26; 26' ; 26")~~ (26, 26', 26'') fluidly connecting the combined mist separator and heat exchanger (20) to the boil-off gas feed line[[;]],

[[-]] wherein said first (22) and second ~~(26;26' ; 26")~~ (26, 26', 26'') conduits ~~being~~ are fluidly connected via a cooler (24) in said combined mist separator and heat exchanger (20), and

[[-]] wherein the cooler (24) comprises a wall configured to separate the boil-off gas from said condensed boil-off gas (LNG) and configured to transfer heat between the boil-off gas and said condensed boil-off gas (LNG) ~~is heat exchanged against said cooler (24)~~ prior to the boil-off gas being fed into said compressor (10).

8. (currently amended) The apparatus of claim 7, ~~characterized by~~ wherein said second conduit (26) ~~fluidly connecting the combined mist separator and heat exchanger (20) to the boil-off gas feed line~~ connects the cooler of said combined mist separator and heat exchanger (20) to said boil-off gas feed at a location upstream of said combined mist separator and heat exchanger (20).

9. (currently amended) The apparatus of claim 7, ~~characterized by~~ wherein said second conduit (26') ~~fluidly connecting the combined mist separator and heat exchanger (20)~~ connects to the boil-off gas feed line at a location ~~after~~ downstream of the first compression stage of said compressor (10).

10. (currently amended) The apparatus of claim 7, ~~characterized by~~ wherein said second conduit (26") ~~fluidly connecting the combined mist separator and heat exchanger (20)~~ to the boil-off gas feed line downstream of said compressor (10).

11. (currently amended) The apparatus of claim 7, ~~characterized by~~ further comprising:

a control valve (25) in said first conduit (22)~~, for controlling~~ configured to control the LNG flow rate into the combined mist separator and heat exchanger (20).

12. (currently amended) The apparatus of claim 7, ~~characterized by~~ further comprising:

a first control unit (60) connected to the control valve (25) and the boil-off gas feed line downstream of the combined mist separator and heat exchanger (20) and upstream of said compressor (10)[[,]]; and

a second control unit (61) connected to the control valve (25) and the boil-off gas feed line upstream of the cold box (30) and down stream of said compressor (10), ~~whereby~~

wherein said first and second control units are configured to control the LNG flow rate into the combined mist separator and heat exchanger (20) ~~is controllable~~ based on ~~the~~ sensed temperatures of the boil-off gas in the feed line i) downstream said combined mist separator and heat exchanger (20) and ii) downstream said compressor (10).

13. (currently amended) The apparatus of claim 7, ~~characterized in that~~ wherein the combined mist separator and heat exchanger (20) additionally comprises a boil-off gas inlet (27), a chamber (29) and a drain (92) upstream of said cooler (24), and a mesh screen (28) between said heat exchanger (24) and an outlet (91),

~~whereby~~ wherein the cooler (24) is configured to cool the boil-off gas ~~is cooled~~ by heat exchange ~~with the cooler (24)~~.